

## Private Construction Summary Measures

Type of Construction	O	CI	I	C	I/C	M7	Q2	F
<b>Total Private Construction</b>	5.80	0.96	0.68	0.56	1.22	0.12	0.17	820.99
<b>Residential (inc. Improvements)</b>	7.30	1.00	0.52	0.83	0.63	0.12	0.18	1095.75
New single family	6.36	1.04	0.36	0.94	0.39	0.10	0.30	782.63
New multi-family	5.02	2.67	2.40	1.19	2.01	0.56	0.50	29.23
<b>Office</b>	4.60	3.68	3.15	1.68	1.88	0.57	0.56	20.48
General	5.06	4.04	3.51	1.83	1.92	0.71	0.54	14.26
Financial	9.44	7.79	6.69	2.73	2.45	0.80	0.99	7.38
<b>Commercial (inc. Farm)</b>	5.36	2.46	2.25	0.79	2.84	0.28	0.43	102.45
Automotive	9.32	7.93	7.38	2.08	3.55	0.78	0.99	9.49
Service/parts	13.49	11.16	10.26	2.91	3.52	0.86	0.80	5.76
Parking	14.36	11.57	10.48	3.82	2.74	0.75	0.70	9.12
Food/beverage	8.03	7.13	6.55	1.88	3.48	0.59	1.15	13.51
Food	8.03	6.84	6.20	1.93	3.22	0.56	0.78	18.05
Dining/drinking	8.03	6.84	6.20	1.93	3.22	0.56	0.78	18.05
Multi-retail	6.78	4.34	4.10	1.08	3.79	0.39	0.45	61.64
General merchandise	8.22	6.16	5.81	1.37	4.23	0.40	0.72	34.51
Shopping center	7.55	4.23	3.57	1.86	1.92	0.49	0.41	55.04
Shopping mall	10.28	8.06	7.68	2.67	2.88	0.50	0.58	22.47
Other commercial	8.36	5.05	4.58	1.78	2.56	0.44	0.51	48.33
Building supply store	10.48	7.55	6.13	3.60	1.70	0.63	0.49	13.98
Other stores	10.67	7.45	6.71	2.53	2.65	0.43	0.36	41.99
Warehouse	6.26	3.46	2.82	1.68	1.67	0.66	0.68	22.91
General commercial	6.26	3.92	3.38	1.65	2.04	0.54	0.49	35.60
<b>Health Care</b>	3.52	2.49	2.18	0.88	2.49	0.60	0.80	17.51
Hospital	4.39	2.71	2.32	1.12	2.08	0.68	0.65	15.02
Medical building	6.51	4.66	4.13	1.50	2.76	0.96	1.07	5.64
<b>Educational</b>	7.36	4.34	3.81	1.53	2.49	0.35	0.45	67.27
Preschool	18.90	14.38	12.64	5.02	2.52	0.70	0.73	13.70
Primary/secondary	13.11	8.61	7.55	3.83	1.97	0.39	0.38	45.71
Higher education	8.16	5.54	5.17	1.76	2.93	0.45	0.68	33.75
Instructional	9.76	8.27	7.57	2.24	3.38	0.39	0.70	29.17
Dormitory	15.37	11.93	9.79	5.56	1.76	0.52	0.53	32.85
Other educational	10.17	9.17	8.49	2.73	3.11	0.86	0.97	5.75
Gallery/museum	10.17	7.95	7.33	2.65	2.76	0.77	0.92	6.70
<b>Religious</b>	5.55	3.75	3.52	1.01	3.49	0.43	0.54	33.68
House of worship	6.31	4.27	4.06	0.93	4.36	0.44	0.54	34.99
Other religious	7.80	6.24	5.34	2.52	2.12	0.78	0.90	9.23
<b>Amusement and Recreation</b>	6.00	4.96	4.53	1.75	2.58	0.59	0.90	17.25
Theme/amusement park	14.79	13.84	12.07	6.24	1.93	0.93	0.86	5.56
Sports	11.78	9.69	8.58	3.29	2.61	0.78	0.71	8.76
Social center	8.29	6.55	6.27	1.39	4.50	0.85	1.08	7.49
Movie theater/studio	12.33	9.91	8.69	3.80	2.29	0.71	0.51	13.87
<b>Transportation</b>	10.48	4.61	4.20	1.36	3.09	0.32	0.58	75.50
Air	12.60	10.45	9.31	3.57	2.61	0.71	0.79	8.90
Land	12.45	5.49	4.94	1.75	2.82	0.28	0.47	74.62
<b>Communication</b>	10.67	5.79	5.46	1.29	4.23	0.43	0.56	30.11
<b>Power (inc. Gas and Oil)</b>	11.86	8.25	6.95	3.24	2.15	0.58	0.57	23.77
Electric	11.86	8.08	6.60	3.39	1.95	0.69	0.60	22.85
<b>Highway and Street</b>	21.58	14.86	12.52	6.21	2.02	0.60	0.57	16.45
<b>Water Supply</b>	15.51	12.88	12.44	4.56	2.73	0.60	0.63	15.53
<b>Manufacturing</b>	5.19	3.66	2.92	1.90	1.54	0.34	0.26	35.47
Chemical	9.38	8.04	6.80	3.36	2.02	0.69	0.69	9.67
Fabricated metal	14.15	11.25	10.30	3.68	2.80	0.90	1.13	5.38

## Definitions of Summary Measures

Summary measures of the seasonal, cyclical, and irregular components of the construction put in place series provide a rough for use in interpreting current percentage changes in the seasonally adjusted data. Detailed explanations of the basic method and definitions of the measures used appear in Electronic Computers and Business Indicators, Occasional Paper 57, National Bureau of Economic Research, New York, 1957.

The following are brief descriptions of the measures shown in the table above:

### **Average percent change of the original series**

Header: **O**

Description: The average month-to-month percentage change, without regard to sign, of the original (not seasonally adjusted) series.

### **Average percent change of the seasonally adjusted series**

Header: **CI**

Description: The average month-to-month percentage change, without regard to sign, of the seasonally adjusted series.

### **Average percent change of the irregular component.**

Header: **I**

Description: The average month-to-month percentage change of the irregular component. This component is obtained by dividing the trend-cycle component into the seasonally adjusted series.

### **Average percent change of the trend-cycle component**

Header: **C**

Description: The average month-to-month percentage change of the trend-cycle component. This component is a smoothed version of the seasonally adjusted series obtained by means of a moving average.

### **Ratio of the irregular component to trend-cycle component**

Header: **I/C**

Description: Average relative month-to-month change, without regard to sign, of the irregular component divided by the average relative month-to-month change, without regard to sign, of the trend-cycle component. The ratio serves as an indication of the series' relative smoothness (small values) or irregularity (large values).

### **Measure of the amount of moving seasonality present relative to the amount of stable seasonality**

Header: **M7**

Description: A function of the F-test assessing the significance of stable seasonality and the F-test assessing the significance of moving seasonality. It is one of the 11 quality monitoring statistics that X-12-ARIMA produces. M7 may range from 0 to 3 with an acceptance range from 0 to 1.

### **Q2 statistic**

Header: **Q2**

Description: This statistic is a weighted average of M1-M11, excluding M2. It is a simplified quality indicator. M2 values can be misleading if the trend shows several changes of direction.

### **F-test statistic for stable seasonality**

Header: **F**

Description: An F-test measure of the presence of stable seasonality. It is the quotient of two variances: (1) the between-months (between-quarters) variance and (2) the residual variance.